DOCUMENT RESUME

ED 246 337 CG 017 579

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TITLE A Universal Method for Evaluating Psychotherapy Service Delivery Systems: The Attrition Curve.
PUB DATE 14 Apr 84
NOTE 13p.; Paper presented at the Annual Meeting of the Eastern Psychological Association (Baltimore, MD, April 12-15, 1984).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Attrition (Research Studies); *Counseling Effectiveness; Counseling Services; Delivery Systems; *Evaluation Methods; Participant Satisfaction; *Psychotherapy; Statistical Distributions; *Termination of Treatment
IDENTIFIERS *Poisson Distribution

ABSTRACT

Data previously reported (Garfield, 1978) on the number of clients/patients appearing at psychotherapy sessions from intake to termination did not identify the attritional features of service delivery systems. These earlier studies were retabulated and new data were accumulated from several contemporary sources: a university counseling center, an outpatient alcoholic treatment center, and a Health Maintenance Organization. The distribution of the flow of cases from intake onward was plotted and revealed the same shaped curve as found in the replotted literature reviews, i.e., a negatively accelerating, declining ("decay") curve, a Poisson Distribution. The means and standard deviations, while different from one clinic to another, showed similar values within each clinic. The attrition curve presents a general, descriptive curve embracing the entire flow of cases from admission to termination. This general, descriptive framework reveals the need for further research into whether clients drop out of therapy because of perceived success or lack of success, and why some cases take longer. Follow-up research must begin with a description of the attrition curve as a necessary baseline before any intervention can be meaningful. (JAC)

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A universal method for evaluating psychotherapy service delivery systems: the attrition curve

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CG 017579

Eastern Psychological Association Meeting

Baltimore, Maryland

April 14, 1984

A universal method for evaluating psychotherapy service delivery systems: the attrition curve

General, Clinical; Clinical, Therapy; Clinical, Behavior Modification

Problem

Is there a characteristic attrition curve describing the delivery of psychological services? This paper reviews studies on the number of clients/patients appearing for each session of psychotherapy from intake to termination in outpatient settings. Data previously reported, beginning in the 1940s, (Garfield, 1978), did not present findings in a way that identified the attritional features of service delivery systems. These earlier studies have been retabulated and found to follow a characteristic attrition curve: a negatively accelerating declining ("decay") curve, closely similar to a Poisson Distribution.

Subjects

This finding from the literature--based on replotting existing data--led to the accumulation of new data from several contemporary sources--outpatient clinic settings--as follows: A university counseling center (covering three years, 1980-81, 1981-82, 1982-83, with over 400 cases, each year); an outpatient alcoholic treatment facility (covering both first admissions--N = 345 cases--and second admissions from same patient population--N = 45 cases--during a 2½-year period); and a Health Maintenance Organization (HMO), covering a 20% sample--157 cases--from a one-year period of clinic activity, 1981.

Procedure

The distributions of the flow of cases from intake onward to an asymptote among these three clinics was plotted and revealed the same shaped curve as found in the replotted literature review, viz., a negatively accelerating

declining curve, a Poisson Distribution. The means and standard deviations while different from one clinic to another, showed similar values within each clinic. The asymptotes differed considerably between these three clinics despite the fact that two were time-limited (10 and 20 sessions, respectively) and one was time-unlimited (Phillips and Fagan, 1982).

Results

The results from the Garfield (1978) article are shown, as re-plotted, in Figure 1. This observation lead to the accumulation of data from a university counseling center presented in Figure 2 covering a three-year span (1980-1983).

(Figure 1 here)

Figure 2 illustrates the approximate equality of the means and standard deviations within each year for the counseling center data.

(Figure 2 here)

Figure 3 shows the distribution of the number of visits in an out-patient alcoholic clinic (N = 400 cases, 2½ years) and also the distribution of 55 re-admission cases. Note the changes in the means and standard deviations, as well as the asymptote values for these two distributions on the same population of patients.

(Figure 3 here)

A somewhat contrasting set of data came from the HMO facility in the same city and neighborhood as the university counseling center clientele, although the former clinic served the general community and the latter only the university population.

(Figure 4 here)

These two facilities revealed interesting similarities and differences in service delivery characteristics: They were different in the time-limited features (10 vs 20 session limits); despite this the means and standard deviations were very similar across the two clinics and over several years. The drop in clients attending therapy after intake shows some differences in the two settings as does the length of the asymptote. The alocholic clinic, however, Figure 3, displays a very long asymptote--about 6-7 standard deviations among the first admission cases.

Although all clinics showed the same Poisson-like distribution, several other features are brought into bolder relief by and through the descriptive characteristics of the Poisson Distribution. First, the drop in the number returning for therapy after the intake provides interesting contrasts--is this drop associated with an efficient delivery system in which clientele receive what they want in one session? Or is this drop associated with relative dissatisfaction with the intake portion of the delivery system, hence people do not return? A second feature of the attrition curve is that of the nature and length of the asymptote. Note the considerable differences between the HMO data asymptote and the latter in connection with the alcoholic first admission cases; the counseling center data falling in between the other two data sources. Does a lengthier asymptote arise in part in relation to a steep drop in clientele after intake, thereby suggesting both selection in and selection out of cases in the system? Only further research will begin to answer this question. It is to be noted, however, that despite important and interesting differences between these delivery systems, serving apparently different diagnostic populations, different cultural/educational populations, and serving them for different length of time (in relation to clinic policy), the overall distribution of the flow of cases is remarkably similar across the data bases, thus allowing the formation of a standard set of descriptive characteristics (the attrition curve or the Poisson Distribution) as a general norm. Many heuristic leads are provided by this presumptive universal standard for describing and comparing psychotherapy delivery systems.

Implications And Conclusions

The most important general matter arising from the description of the attrition curve is just that--a general, descriptive curve embracing the entire flow of cases from inception (admission into the system) out to termination. Within this general descriptive framework, separate questions arise as to the drop in clientele

after intake, the efficacy of this feature as it contributes to positive and efficient help-giving or its opposite, and the length of the asymptote. The latter is particularly important as it nests a number of service delivery questions concerning why some cases take relatively much longer time; whether this is related, in turn, to poor conceptualization of the client's difficulties, whether the client is in the "right" delivery system, whether some therapists contribute disproportionately more to the lengthier cases, and so forth. These incisive anchorage points along the attrition curve, each in their own way, excite the researcher and suggest a number of heretofore unidentified research questions that will tell us more, in time, about psychotherapy, disgnosis, age/gender differences, therapist styles and persuasions, and, of course, outcome results.

Once a firmer grasp of the attrition curve is obtained, experimental intervention of the delivery system suggests itself. The intake process, being so seminal and direction-setting, might be increased to a longer time (say, two to three hours), followed by a lengthier period of time (say, one to three months) before the client is given the opportunity to return, then assessing results; the number of sessions might be changed anywhere from three to ten or twelve, thereby affording a base for comparing service delivery economies along with behavior change effectiveness; and, also, among many other interventions, stopping the therapy after a given number of sessions, especially if the asymptote extends out more than three standard deviations in previously treated populations in a given clinic.

Implications also abound around the problem of evaluating psychotherapy outcome. Most research in this area has not even identified the attrition curve, hence the entering into the flow of cases from intake to termination may be beset with many sampling biases. All follow-up research must begin with a description of the attrition curve as a necessary baseline before any intervention

can become meaningful. This is true, incidentally, for analogue research as well as for self-initiated, walk-in clientel most characteristic of mental health and counseling center clientel.

Finally, a most far-ranging implication is that of revision of theories of psychotherapy. Hardly an extant theory of counseling/psychotherapy addresses any issues relating to attrition. Theories of psychotherapy are spun out of poor or scattered or inconsistent and inconclusive data bases, thereby dooming themselves to considerable invalidity. A wholly new data base posited on the attrition curve will now become necessary for any evaluative research to gain meaningfulness, irrespective of the theories of the promulgatores, type of therapy, and so on. Economies of all sorts--conceptual, research, service delivery, and experimental intervention in delivery systems--will now be possible and will presumably greatly increase the scientific and humamitarian respectability of the whole psychotherapy enterprise (Strupp et al 1969).

References

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Phillips, E. L., & Fagan, P. J. (1982, August). Focus on the intake and first therapy interviews. Paper presented at American Psychological Association Convention, Washington, D. C.

Strupp, H. H., Fox, R. E., & Lesser, K. (1969). Patients view their psychotherapy. Baltimore: Johns Hopkins University Press.

Table 1. Re-Plotting Garfield data (Garfield & Bergen, 1978, Table 6-1, p. 195) Regarding Length-Of-Treatment; Total N = 560.

Number Interviews	No Cases	Percent of Cases	//	% Remaining*
Less than 5	239	42.7		57.3
5 - 9	134	23.9		33.4
10 - 14	73	13.0		20.4
15 - 19	41	07.3		13.1
20 - 24	24	04.3		08.8
25 & Over	40	08.8	//	00.0

*Calculations showing attritional loss; added by present author.

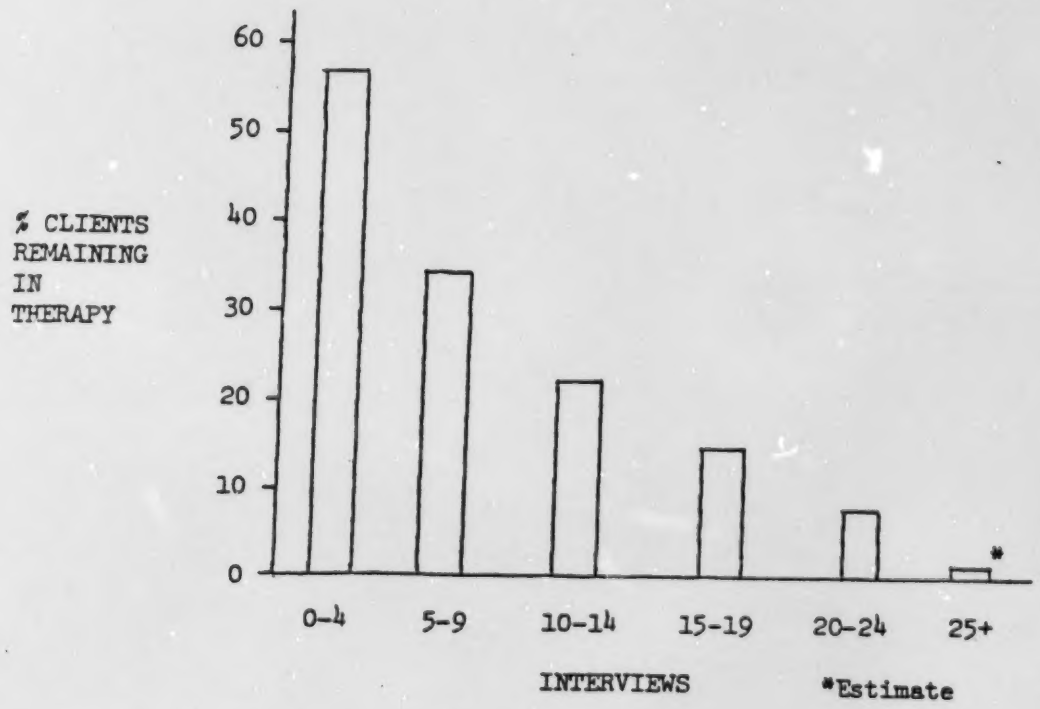

Figure 1. Showing Attritional Curve (% remaining after each session interval); from Garfield & Bergen, 1978 (See Table 1, above.)

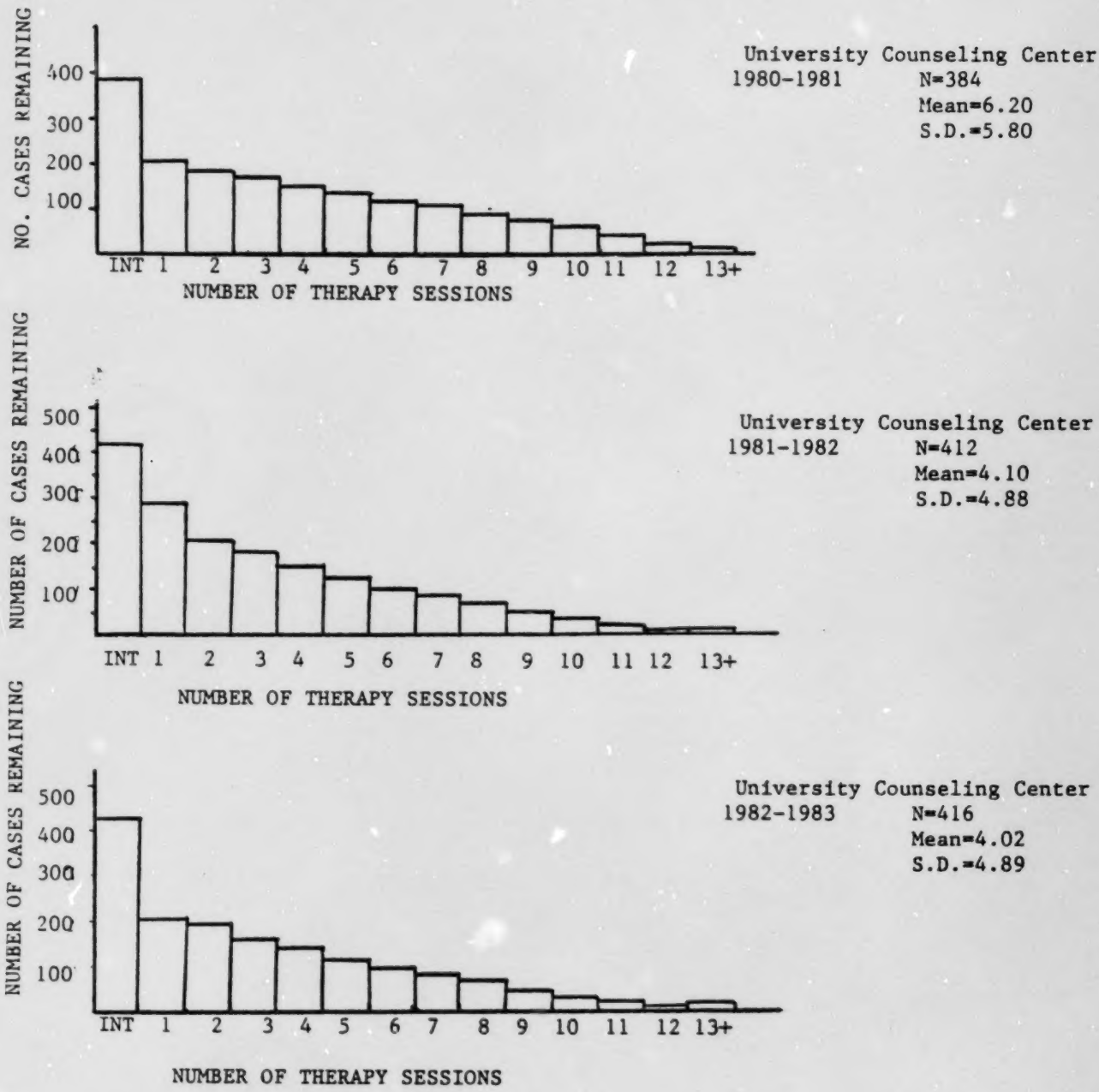

FIG.2 COUNSELING CENTER DATA, 1980-1983, Attrition Curves Included

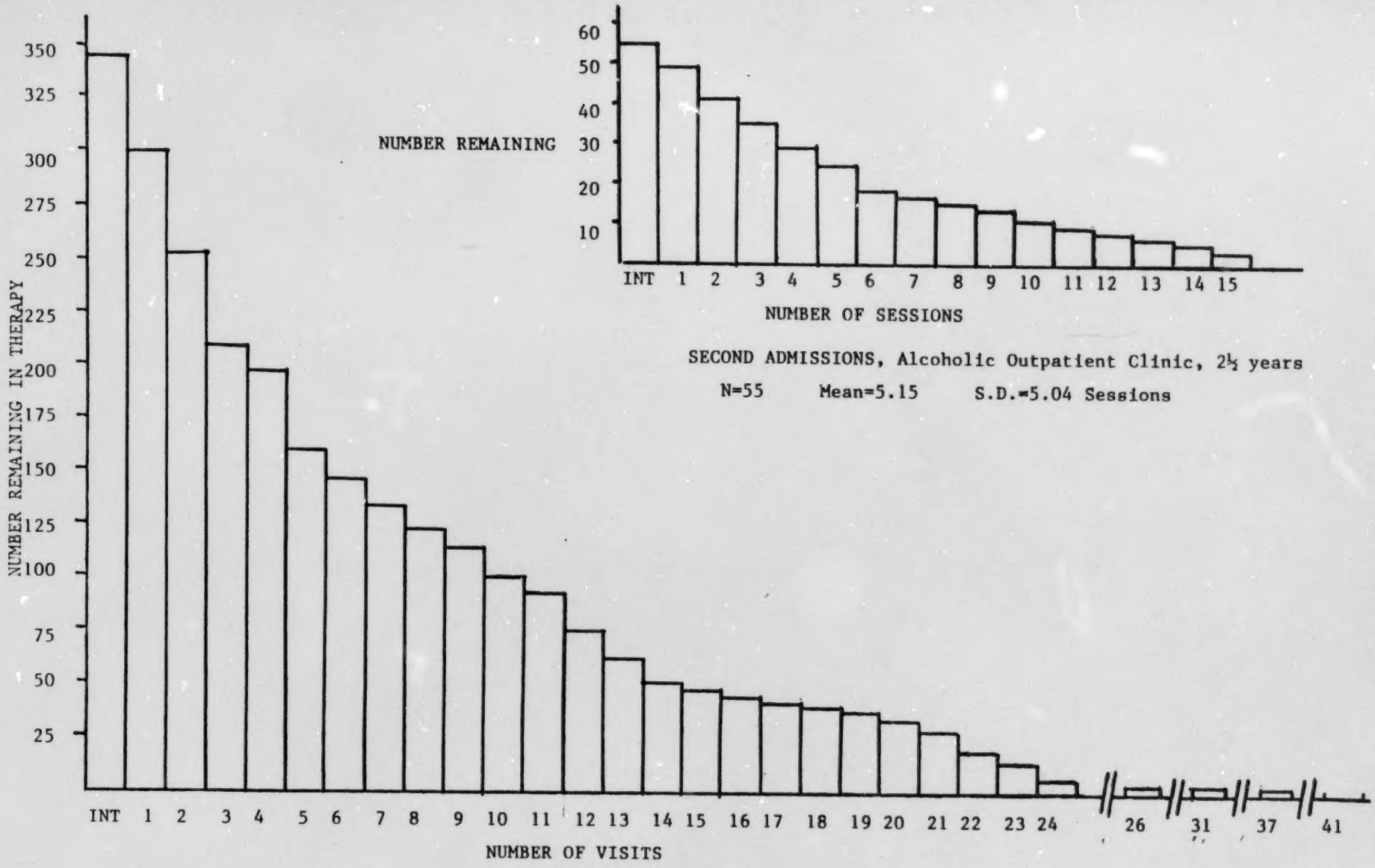

FIG. 3 FIRST ADMISSIONS, Alcohol Outpatient Clinic, 2½ years N=345 Cases, Mean=8.13, S.D.=8.50 Sessions

Also" SECOND ADMISSIONS, same population: N + 55 cases; Mean = 5.15; S.D. = 5.04 Sessions

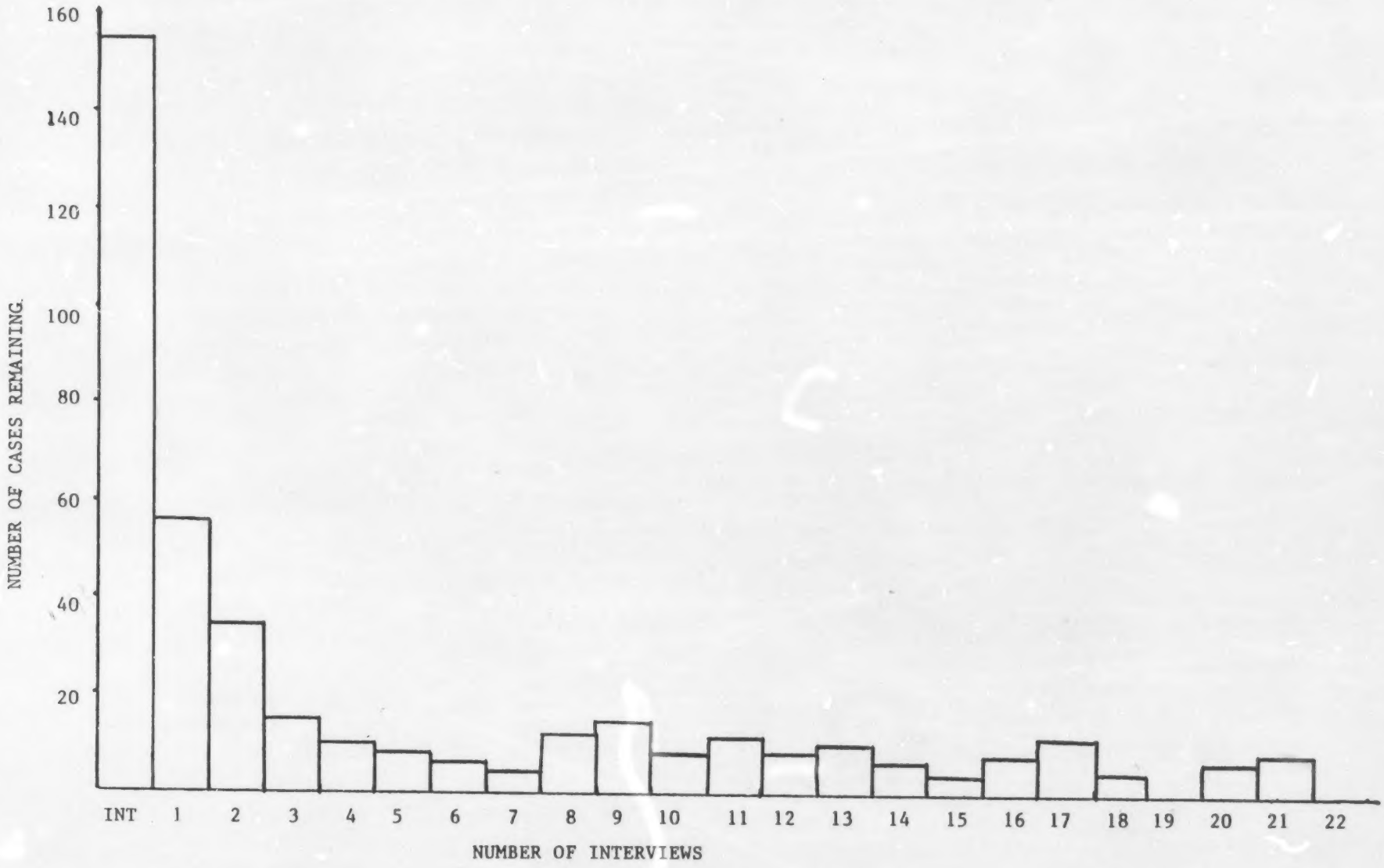

FIG. 4 HMO Outpatient Clinic, 1 year, 1981,20% Sample N=153 Mean=5.27 S.D.=5.08 Sessions